

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000472**Date Inspected:** 06-Sep-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xiu Zhai Gu**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock Up Assemblies 77M & 114M**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication of the Mock-up 77 and 114 meters elevations scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Tower Mock-up 77 Meters Elevation

The QA inspector witnessed the ZPMC Magnetic particle Testing (MT) on the root pass from the Mock-up 77 meters skin panel B weld joints # 5 and 6. The QA inspector observed approved technician ASNT Level II Cai Xin Xin performing MT verifications. The QA inspector observed that Mr. Cai MT verifications appeared to be in compliance with the Contract documents.

The QA inspector performed visual verifications to the backgouged excavated area on the Complete Penetration Joint (CJP) located at the junction of the skin panel E and the stiffener mp5, joint # 3.

ZPMC, welder operators Liu Xie and Zhang Xiagrong were observed by the QA Inspector performing welding operations on the skin panel C.

Mr. Liu was observed welding the filler and cover passes at the junction of the mp7 to skin panel C, joint # 6 following the approved welding procedure specification WPS-B-T-2332-TC-P5-F. Base metal was designated as A-709 Grade 345. ZPMC was using the automated flux cored arc welding-Gas(FCAW-G) process in the horizontal (2G) position with the 1.4 mm diameter electrode designated as E71T-1 /AWS A5.20, brand name Supercored. The QA Inspector verified amperage, voltage, travel speed, preheat and heat interpass temperatures

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

for the filler passes. The QA inspector found that the welding parameters recorded after ZPMC approved Certified Welder Inspector Xiu Zhai Gu appeared to be in accordance with the contract documents. ABF QA inspector Kevin Dye was present during welding.

Mr. Zhang was observed by the QA inspector welding the filler and cover passes at the junction of the mp7 to skin panel C, joint # 5 following the approved welding procedure specification WPS-B-T-2332-TC-P5-F. Base metal was designated as A-709 Grade 345. ZPMC was using the semi-automatic flux cored arc welding gas(FCAW-G)process in the horizontal (2G) position with the 1.4 mm diameter electrode designated as E71T-1 /AWS A5.20, brand name Supercored. The QA Inspector verified amperage, voltage, travel speed, preheat and heat interpass temperatures for the filler passes. The QA inspector found that the welding parameters recorded after ZPMC approved Certified Welder Inspector Xiu Zhai Gu appeared to be in accordance with the contract documents.

Note: The photo below shows the diaphragm plate SA-104 after cutting operation with CNC oxyfuel cutting machine.

Tower Splice 114 Meters Elevations

The QA inspector witnessed ZPMC Magnetic particle Testing (MT) verifications on the root pass from the skin panel D weld joint # 1. The QA inspector observed MT ASNT Level II technician Cai Xin Xin performing MT verifications. The QA inspector observed that Mr. Cai verifications appeared to be in compliance with the Contract documents.

The QA inspector witnessed the ZPMC MT verifications on the root pass from the skin upper panel C weld joint # 2 & 4. The QA inspector observed Mr. Cai performing MT verifications. The QA inspector observed that Mr. Cai verifications appeared to be in compliance with the Contract documents.

The QA inspector performed 10 % MT verification on the root pass from the skin upper panel C weld joint # 2 & 4.

The QA inspector observed that the weld examined appeared to be in accordance with the contract documents. See TL 6028 generated on this date.



Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

for your project.

Inspected By: Acuna,Alfredo

Quality Assurance Inspector

Reviewed By: Cuellar,Robert

QA Reviewer